

DETERMINANTS OF FDI IN DEVELOPING COUNTRIES: TRADE, INFLATION STABILITY, AND TELECOM INFRASTRUCTURE

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ABSTRACT

This study examines the factors influencing foreign direct investment (FDI) in developing countries, focusing on the role of trade openness, stable inflation, and good telecommunications infrastructure. The study uses data from 50 developing countries in 2019 and applies multiple regression analysis, along with several diagnostic checks, to examine the association between FDI and key economic factors. The results show that trade openness, low inflation, and strong telecommunications infrastructure all have a positive and significant effect on FDI. Surprisingly, GDP growth and corporate tax rates have little effect. The model explains about 48.33% of the changes in FDI, and the results are well supported by diagnostic tests. This research offers new and reliable information through thorough testing of normality, heteroskedasticity, multicollinearity, and model specification, thereby providing policymakers in developing countries with useful guidance.

Keywords: FDI, Developing countries, Trade, Inflation, Infrastructure.

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I. INTRODUCTION

In recent years, Foreign Direct Investment (FDI) flows have become an important indicator of global economic integration. Developing countries regard FDI as key to economic growth, technology diffusion, and job creation. However, FDI is not widely distributed; it is concentrated in a few countries. The top five developing countries accounted for more than 60% of FDI inflows to developing countries in 2019, according to UNCTAD statistics. This indicates a significant level of concentration. Given this inequality, questions arise about why some countries are more successful than others at attracting FDI.

FDI flows changed significantly due to the COVID-19 pandemic, shrinking by 35 per cent globally in 2020. The contraction was sharper in developed than in developing economies. An uneven recovery and new trends in digitalisation and reshoring have reshaped investor priorities. Understanding pre-pandemic FDI determinants is therefore essential for designing effective recovery strategies. Focusing on 2019—a pre-pandemic "normal" year—provides a valuable baseline for assessing the pandemic's impact and formulating recovery policies.

With rapid digital transformation during the pandemic, telecommunications infrastructure has become increasingly important for attracting foreign direct investment. International companies are looking for places with low labour costs and digital infrastructure that can support their increasingly technology-dependent businesses. Therefore, examining the impact of telecommunications infrastructure on foreign direct investment in 2019 provides insight into the importance of this component even before the pandemic and indicates that demand will continue to grow.

Developing economies are highly dependent on foreign direct investment (FDI). New technologies, jobs, and connections to global economic networks can be achieved through FDI. The World Investment Report (UNCTAD, 2019) states that developing countries account for 54% of global FDI, totalling \$706 billion. This shows how important international investment is for economic progress. However, this investment is not evenly distributed among developing countries, with most of it concentrated in East Asia and the Pacific. Nevertheless, regions such as Sub-Saharan Africa and some South Asian countries still face significant obstacles in attracting foreign investment (Asiedu, 2006). This situation raises many questions about what makes a country attractive to foreign investment, especially during the era of digital economic growth and in the aftermath of the pandemic, when developing countries are in dire need of foreign investment to improve their economies.

While previous studies have predominantly employed panel data spanning multiple years to examine FDI determinants, this approach often obscures period-specific effects and masks the structural relationships that exist under stable economic conditions (Blonigen, 2005). The novelty of this study lies in its deliberate focus on a single, pre-pandemic year—2019—which represents the last period of

"normal" global economic activity before the COVID-19 pandemic disrupted investment patterns worldwide (UNCTAD, 2020). This cross-sectional design offers two distinct advantages over longitudinal studies: first, it eliminates the confounding effects of time-varying factors such as business cycles, policy changes, and global crises, thereby providing a clearer snapshot of the structural determinants of FDI; second, it establishes a crucial baseline that can inform post-pandemic recovery strategies by identifying which fundamentals truly matter for attracting FDI under normal conditions. Furthermore, while existing studies have examined trade openness, inflation, and infrastructure separately, few have integrated these three key variables, particularly telecommunications infrastructure as a proxy for digital readiness, into a single comprehensive model specifically for developing countries in the immediate pre-digital era (Braga Nonnenberg & Cardoso Mendonca, 2004; Campos & Kinoshita, 2003).

This study thus fills this gap by offering updated, rigorously tested evidence on the relative importance of traditional macroeconomic factors versus modern digital infrastructure in determining FDI location choices. There is a clear gap in existing literature, and the need to develop policies to attract sustainable foreign investment is the reason for this research. According to research published by Alfaro et al. (2004) in the *Journal of International Economics*, economic stability and trade openness are highly beneficial for Foreign Direct Investment (FDI). Similarly, a study by Demirhan & Masca (2016) in *Prague Economic Papers* found that telecommunications infrastructure and high trade openness are important factors supporting FDI in 38 developing countries. However, a study by Asiedu (2006) in *World Development* shows that the effectiveness of these factors can vary greatly depending on the location and the quality of institutions there. Schneider & Frey (1985) even found that research results can vary depending on the time period analysed and the model applied.

The importance of this research lies in the need to conduct a comprehensive analysis of how classical macroeconomic factors, such as GDP and inflation, interact with more specific policy factors, such as telecommunications networks and international trade. Many previous studies, such as Borensztein et al. (1998) and Balasubramanyam et al. (1996), have focused more on general physical infrastructure. Shah (2014) states that telecommunications infrastructure acts as an "economic activity driver" that helps reduce operational costs for large companies. Discrepancies in research methods are also evident in previous studies. Many of these studies used panel data spanning several years, making it difficult to identify effects within a specific time frame (Blonigen, 2005). The study method, which focuses solely on 2019, can provide a clearer picture of the relationship among variables without being distorted by factors such as economic cycles or policy changes. Therefore, this year is an important basis for assessing future policies. This study aims to examine the factors influencing Foreign Direct Investment (FDI)

that flows relative to GDP. This study examines trade openness (TO), inflation stability (IS), and the quality of telecommunications infrastructure (TI) in developing countries in 2019. The objective of this research is to further explore the significance of these variables while accounting for other variables such as economic growth (GDP) and tax burden (TAX). To ensure the reliability of the results, this study uses data from 50 developing countries and employs a carefully evaluated linear regression model.

Support for the key elements of this study is evident in the literature. For trade liberalisation, Demirhan & Masca (2016) found a positive and statistically significant coefficient of 0.0179 at the 10% level. On the other hand, Balasubramanyam et al. (1996) show that foreign direct investment is more effective in countries with open trade policies. Regarding inflation stability, Schneider & Frey (1985) and Demirhan & Masca (2016) both find a significant negative impact of inflation on foreign investment. For telecommunications infrastructure, Shah (2014) reports a positive coefficient of 0.9244, indicating the importance of digital infrastructure in attracting foreign investment. On the other hand, for the controlled variables, Djankov et al. (2010) found that high taxes clearly reduce people's interest in investing, with a coefficient of -0.0810 at the 5% significance level.

The development of FDI in developing countries has a long history closely linked to transformations in economic development theory. Between 1950 and 1960, foreign capital inflows were seen as a solution to domestic capital shortages. This was in line with the principles of Harrod-Domar growth theory. Then, in the 1970s and 1980s, a more sceptical view of foreign direct investment emerged, seen as a new form of colonialism. However, since 1990, with the growth of globalisation and the emergence of more autonomous growth theories, foreign direct investment has once again been viewed positively as a tool for development through technology and knowledge. In the current situation, foreign direct investment has shifted from merely seeking natural resources and markets to seeking efficiency and strategic assets. This shift has made factors such as digital connectivity, policy stability, and integration into the global value chain increasingly important compared to traditional factors such as cheap labour or natural resources.

This research has significant policy relevance given the increasingly fierce global competition to attract FDI. Developing countries are competing not only with other developing countries but also with developed countries that offer attractive incentives. The findings of this study can assist policymakers in allocating limited resources to factors that truly determine investment attractiveness.

Furthermore, in the post-COVID-19 pandemic context, FDI patterns are expected to change fundamentally. Multinational companies may prioritise supply chain resilience and digitalisation over cost efficiency alone (UNCTAD, 2021). Therefore, understanding the determinants of FDI under normal conditions in 2019 is an important basis for formulating post-crisis investment recovery strategies.

This article is organised as follows: Section II reviews the literature; Section III describes the methodology; Section IV presents the results and discussion; and Section V concludes. Next, Chapter 3 provides a thorough explanation of the research methodology, beginning with the data sources and characteristics, the variable definitions, the data collection process, and the econometric model applied. This article also provides a detailed analysis of the criteria used to select cross-sectional studies for 2019. Chapter 4 presents the research results and relates them to previous theories and studies. Chapter 5 concludes the discussion by summarising the main points of the research, presenting policy recommendations, and outlining the study's limitations and directions for further research. Discussion of the main points, policy recommendations, research limitations, and suggestions for further research. Through a comprehensive approach and a focus on analysis in 2019, this study is expected to make a significant contribution to FDI research, especially for developing countries seeking to enhance the attractiveness of foreign investment in the digital era.

II. LITERATURE REVIEW

FDI is a central topic in international economics, with various theories explaining its determinants and consequences. FDI theories have evolved from established frameworks to newer approaches emphasising human behaviour and governance (Dunning, 2009). The primary theoretical foundation of this study is the Eclectic Paradigm, also known as the OLI Framework, first introduced by Dunning (2009) and Dunning & Lundan (2008). This theory explains that a foreign company's decision to invest abroad is determined by three main factors. First, Ownership advantages (O), such as existing technology, brand strength, managerial capabilities, and production efficiency. Second, Location advantages (L), which encompass market conditions, production costs, economic regulations, and infrastructure standards in the host country. Third, Internalisation advantages (I), i.e., firms' ability to efficiently organise and manage their activities across multiple countries.

While the primary focus of this study is on location advantages (L), internalisation advantages (I) remain conceptually relevant to the choice of variables. Internalisation theory suggests that firms prefer to internalise their operations across borders rather than relying on external market mechanisms when transaction costs are high and property rights are poorly enforced (Buckley & Casson, 1976; Hennart, 1982). In the context of this study, telecommunications infrastructure can be seen as a factor that reduces the transaction costs associated with cross-border coordination, thereby facilitating internalisation. Countries with advanced telecommunications networks enable multinational firms to monitor, control, and coordinate their foreign affiliates more efficiently, reducing the need for costly external contracting (Dunning & Lundan, 2008). Similarly, trade openness reduces informational asymmetries and market frictions, making it easier for firms

to internalise international transactions without facing prohibitive tariffs or non-tariff barriers (Helpman et al., 2004). Inflation stability, on the other hand, reduces the uncertainty and risk that complicate internalisation decisions, as volatile macroeconomic conditions increase the costs of monitoring and enforcing cross-border contracts (Darby et al., 2010). However, internalisation advantages are not directly measured in this study, as the focus is on host-country characteristics (location advantages) rather than on firm-specific strategies. This approach is consistent with the cross-sectional nature of our data and the policy-oriented objective of identifying which macroeconomic and infrastructural factors make developing countries more attractive to FDI. Nevertheless, the indirect links between internalisation and our chosen variables are acknowledged, as better telecommunications, greater trade openness, and stable inflation collectively reduce the transaction costs that drive firms to internalise their international operations.

The variables analysed are trade openness, inflation stability, and telecommunications infrastructure quality, which are concrete examples of such location advantages. The OLI framework has continued to evolve; in 2000, Dunning expanded it to incorporate knowledge-based economies and globalisation, emphasising that connectivity and innovation capabilities are increasingly important in the digital era (Dunning, 2000; Markusen & Venables, 1999). Another important theory underpinning this research is Endogenous Growth Theory, which highlights the role of FDI in technology transfer and productivity enhancement through spillover effects (Lucas, 1988; Romer, 1986). Borensztein et al. (1998) further developed this theory by showing that the positive impact of FDI on economic growth occurs only when the host country has a sufficiently large and skilled workforce. This theory helps explain how factors such as communication networks and trade liberalisation can support technology diffusion through FDI (Noorbakhsh et al., 2001). The third relevant theory is Institutional Theory, which explains the role of formal and informal institutions in creating an investment-friendly environment (North, 1990). According to this theory, the quality of a country's institutions affects the level of uncertainty and risk perceived by foreign investors, thereby influencing their investment decisions (Busse & Hefeker, 2007).

In this study, inflation stability can be considered an indicator of macroeconomic policy quality, which is part of a country's formal institutions (Wei, 2000). Additionally, Porter's (1990) theory of national competitive advantage offers a complementary perspective, emphasising that a country's competitiveness is determined by factor conditions, demand conditions, related and supporting industries, and firm strategy, structure, and rivalry. In this context, trade openness relates to broader demand conditions and competition, while telecommunications infrastructure is part of factor conditions, and inflation stability reflects macroeconomic stability that supports firm operations.

Building on these theories, this study develops a conceptual model linking

key FDI determinants in developing countries. Trade openness is expected to affect FDI through two channels: first, by expanding market access, thereby enabling foreign firms to achieve greater economies of scale; second, by integrating into global value chains, which improves efficiency (Helpman et al., 2004; Javorcik, 2004). Inflation stability encourages FDI by reducing the risk and uncertainty investors face (Darby et al., 2010). Telecommunications infrastructure reduces transaction costs and facilitates the coordination of international business activities. The conceptual framework thus provides a solid basis for empirically examining the determinants of FDI in 2019.

Empirical evidence consistently identifies trade openness as a positive determinant of FDI. Using a cross-sectional study of 38 developing countries over 2000–2004, Demirhan & Masca (2016) found a positive coefficient of 0.0179 significant at the 10% level. This finding is reinforced by Balasubramanyam et al. (1996), who showed that FDI has a greater growth impact in countries with open trade regimes. The underlying mechanism distinguishes between market-seeking FDI (which may be encouraged by trade barriers) and efficiency-seeking FDI (which requires openness for global value chain integration) (Jordaan, 2004). Blonigen (2005) adds that trade openness also affects FDI through knowledge spillovers and competition, which enhance productivity. However, Helpman et al. (2004) found that the relationship between trade openness and FDI differs between developed and developing countries, with stronger effects in the latter. Buch & Lipponer (2007) note that the effect is moderated by institutional quality and political stability. Loree & Guisinger (1995) found that policy factors have substantial impacts.

Inflation stability, as a proxy for macroeconomic stability, shows a consistently negative relationship with FDI. In their pioneering study of 54 developing countries, Schneider & Frey (1985) found a significant coefficient of -0.021, arguing that high inflation reflects not only policy instability but also fundamental problems in economic management. Demirhan & Masca (2016) reported a coefficient of -0.0523, significant at the 10% level, while Asiedu (2002) confirmed the negative effect across regions. Busse & Hefeker (2007) found a non-linear negative effect that is stronger when inflation exceeds a certain threshold. The transmission mechanisms include increased uncertainty and risk, exchange rate volatility, and unpredictable economic policies (Darby et al., 2010).

Telecommunications infrastructure is increasingly recognised as a crucial determinant in the digital era. Hussain Shah (2014), in a comprehensive study of 90 developing countries over 28 years, found a positive coefficient of 0.9244, significant at the 5% level, confirming the role of telecommunications infrastructure as a "driver of economic activity" that reduces transaction costs. Demirhan & Masca (2016) reported similar findings. In the digital age, connectivity not only affects investment location decisions but also the form of investment, with firms preferring digitally integrated models in countries with good infrastructure (Wheeler & Mody,

1992). Contemporary mechanisms include enabling digital transformation (e.g., 4.0 technologies) and facilitating remote work, which has become increasingly important post-pandemic (Bloom et al., 2025; Xie & Wang, 2023).

For control variables, economic growth (GDP) shows mixed but generally positive results. Artige & Nicolini (2006) found market size to be the most robust determinant, with elasticities around 0.7–0.9. However, Demirhan & Masca (2016) found that GDP per capita growth is significant (coefficient: 0.2804), whereas the level of GDP per capita is not, indicating investor preference for future growth prospects. Ang (2008) found a significant positive effect of real GDP on FDI in Malaysia. Tax policy consistently exhibits a negative relationship with FDI. Djankov et al. (2010) found that a 10-percentage-point increase in the effective corporate tax rate is associated with a 2.2-percentage-point decrease in the investment rate. Becker et al. (2012) found an elasticity of FDI to tax rates of -3.3. Hines & Rice (1994) showed that multinational firms are influenced by tax incentives. However, Hines Jr (1999) noted that the effect differs by investment type, with export-oriented FDI less sensitive than local-market-oriented FDI. Mooij & Ederveen (2008) found that the effectiveness of tax policy depends on the quality of infrastructure and political stability.

For economic growth (H4), while the majority of empirical studies find a positive relationship (Artige & Nicolini, 2006; Ang, 2008), some studies suggest that the effect may be non-significant or even negative in certain contexts. For instance, Blonigen (2005) argues that investors may prioritise long-term economic stability and institutional quality over short-term GDP growth, particularly in developing countries where growth is often volatile. Similarly, Asiedu (2006) found that the positive effect of GDP growth on FDI is weaker in countries with poor institutional environments. Therefore, while H4 is hypothesised to be positive based on market-seeking theories, we acknowledge that the empirical evidence is mixed and that the effect may be context-dependent.

For tax policy (H5), the expected negative relationship is well-established in the literature (Djankov et al., 2010; Hines & Rice, 1994). However, several studies have shown that the effect of taxes on FDI is not always significant, especially when other factors such as infrastructure quality, political stability, and market size are considered (Mooij & Ederveen, 2008). Furthermore, Hines Jr (1999) found that the sensitivity of FDI to tax rates varies by investment type, with export-oriented FDI being less responsive to tax changes than market-seeking FDI. In developing countries, investors may be more concerned with structural factors—such as trade openness and telecommunications infrastructure—than with corporate tax rates, particularly if tax incentives are offset by other operational costs (Becker et al., 2012). Thus, while H5 is hypothesised to be negative, the literature suggests that the magnitude and significance of this effect may vary and could be non-significant in certain contexts.

Table 1. Measurement of Variables and Sign Expectation

Variable	Description	Measurement	Empirical Evidence	Expected Sign
Dependent Variable				
FDI	Foreign Direct Investment	Net FDI inflows (% of GDP)	(Alfaro et al., 2004; Asiedu, 2006)	
Explanatory variables				
TRD	Trade openness	Trade (% of GDP)	(Balasubramanyam et al., 1996; Demirhan & Masca, 2016)	+
INF	Inflation Stability	Consumer price inflation (% of GDP)	(Demirhan & Masca, 2016; Schneider & Frey, 1985)	
LogTI	Telecommunications Infrastructure Log	Fixed telephone subscriptions (per 100 persons)	(Demirhan & Masca, 2016; Shah, 2014)	+
Control Variables				
GDP	Economic Growth	GDP Growth (% annual)	(Ang, 2008; Artige & Nicolini, 2006)	
TAX	Tax Policy	Total tax rate (% of commercial profits)	(Djankov et al., 2010; Hines Jr & Rice, 1994)	

Source: Data processed

Based on this comprehensive empirical review, the research hypothesis is formulated as follows:

H1: Trade openness benefits and significantly affects FDI in developing countries through expanded market access and global value chain integration.

H2: Inflation stability has a negative and significant effect on FDI in developing countries, where high inflation increases uncertainty and investment risk.

H3: Telecommunications infrastructure has a positive and significant effect on FDI in developing countries by reducing transaction costs and facilitating digital operations.

H4: Economic growth positively affects FDI in developing countries, reflecting investors' preference for long-term growth prospects.

H5: Tax rates have a negative effect on FDI in developing countries, following the

principle of profit maximisation in investment decisions.

The literature review also identified several research gaps. First, few studies integrate three key variables (trade openness, inflation stability, and telecommunications infrastructure) into a comprehensive model for developing countries (Braga Nonnenberg, Marcelo José and Cardoso Mendonca, 2004). Second, cross-sectoral studies for a specific year (such as 2019) are rare, even though they can provide unique insights into the determinants of FDI in a specific global economic context (Lipsey, 2006). Third, the interaction between traditional variables and modern digital factors still needs to be explored in more depth (Campos & Kinoshita, 2003). Therefore, this study not only tests the hypotheses but also helps address these gaps, particularly in the context of the digital economy and the post-global crisis.

III. METHODOLOGY

This study uses 2019 data from the World Development Indicators (WDI) published by the World Bank. The selection of 2019 was methodologically motivated. First, 2019 was the last pre-pandemic year before major global investment disruptions. By focusing on 2019, this study can examine the factors that influence foreign investment without interference from issues arising from the global health crisis. Second, using a cross-sectional approach, which examines data from multiple countries simultaneously, allows for understanding differences across countries without the influence of time, thereby providing a clearer picture of the relationship between the variables under study (Gujarati, 2009).

The population in this study comprises all developing countries as defined by the World Bank. The sample was selected using purposive sampling, meaning it was chosen based on predetermined criteria. The criteria for determining a country were: first, the country must be in the lower-middle or upper-middle income category according to the World Bank; second, there must be complete data for all variables to be used in the study; third, the country must not be involved in war or a severe political crisis during the study period. By applying these three criteria, 50 developing countries were identified as eligible and selected for study.

The main variable studied here is the amount of foreign direct investment (FDI), calculated as a percentage of gross domestic product (GDP). Using FDI as a percentage of GDP is a common practice in research because it illustrates the relative impact of FDI on a country's economy (Alfaro et al., 2004). The influencing variables include trade openness, calculated from total trade (exports + imports) as a percentage of GDP; inflation stability (STI), measured by annual consumer inflation; and telecommunications infrastructure (IT), assessed by the natural logarithm of the number of fixed telephone subscribers per 100 people.

The variables controlled in this study are economic growth (GDP). This is measured by real GDP growth each year, in addition to tax (TAX), calculated as the percentage of total profits earned by businesses. The selection of these variables is

based on a literature review indicating that these factors strongly influence foreign investment decisions (Blonigen, 2005). To examine the impact of trade, inflation, and telecommunications on FDI, this study draws on relevant theories and literature to specify the following model:

$$FDI_i = \beta_0 + \beta_1TRD_i + \beta_2INF_i + \beta_3LogTI_i + \beta_4GDP_i + \beta_5TAX_i + \varepsilon_i \tag{1}$$

- where:
- i* = Represents the country;
 - FDI* = Foreign Direct Investment flows to country *i*;
 - TRD* = Trade openness of country *i*;
 - INF* = Inflation rate of country *i*;
 - LogTI* = Log of the telecommunications infrastructure of country *i*;
 - GDP* = Growth rate of country *i*;
 - TAX* = Tax rate of country *i*;
 - β_0 = Constant;
 - $\beta_1, \beta_2, \beta_3, \beta_4, \beta_5$ = Regression coefficient;
 - ε_i = Error term.

Based on previous theory and empirical research (Demirhan & Masca, 2016; Schneider & Frey, 1985; Shah, 2014), the expected signs for each coefficient are: β_1 positive (TRD), β_2 negative (INF), β_3 positive (LogTI), β_4 positive (GDP), and β_5 negative (TAX).

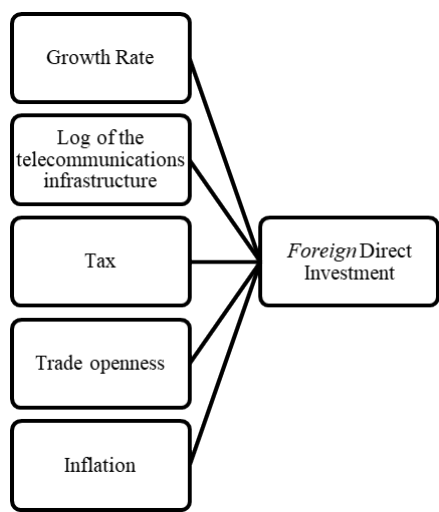


Figure 1. Conceptual Framework

Since the data used in this study are cross-sectional and have specific characteristics, the primary method for calculating the results is Ordinary Least Squares (OLS). However, to ensure the study's results remain reliable, we also use the

Instrumental Variables (IV) method to address potential endogeneity arising from mutual influence between FDI and other variables.

When choosing an estimation method, several factors must be considered. First, FDI may affect independent variables, such as economic growth and trade openness. Second, there may be other variables we did not include that are related to FDI and the independent variables. A series of diagnostic tests was employed to address these issues. The first is a multicollinearity test using the Variance Inflation Factor (VIF), which indicates no serious multicollinearity. The second is a Breusch-Pagan test for heteroscedasticity, which yields a p-value above 0.05, indicating no heteroscedasticity. The third is a normality test of residuals using the Jarque-Bera test, which shows that the residuals are normally distributed.

The Kleibergen-Paap rk LM test and the Cragg-Donald Wald F test were used in this study to assess instrument strength and ensure the instruments met the instrument quality requirements of the Instrumental Variable (IV) method. The results of both tests showed that the instruments used were adequate and reliable. Based on the results of these diagnostic tests, we believe that the OLS method, combined with a robustness check using the IV method, is an appropriate and reliable choice for analysing this cross-sectional data. We also conducted sensitivity tests using various model specifications to ensure that our estimation results were consistent and reliable.

IV. RESULTS AND ANALYSIS

Descriptive statistical analysis provides a summary of the data used in the study. As shown in Table 2, the dependent variable, Foreign Direct Investment (FDI), has an average of -0.089 per cent of GDP and a standard deviation of 0.614. The lowest FDI value is -1.67% and the highest is 1.24%, indicating significant differences in the countries tested's ability to attract foreign investment. The negative average value may be due to several countries experiencing net FDI outflows or significant profit repatriation by foreign investors (UNCTAD, 2019). With an average of 68.755% and a standard deviation of 35.307%, the trade openness variable indicates that international trade integration varies across the countries studied. Some countries have a very high trade-to-GDP ratio, reaching 164.7%, indicating that their economies are open and highly dependent on international trade.

Table 2. Descriptive Statistics

Variable	Obs	Mean	Std Dev	Min	Max
FDI	50	-0.089	0.6139875	-1.670	1.240
GDP	50	3,136	2,558,604	-2,180	8,360

TRD	50	68,755	35,30714	26,120	164,700
INF	50	6,380	11,435.27	-0.360	63,290
TAX	50	24,490	6.639008	7.50	35,000
LogTI	50	1.773735	1.404721	-2.040221	3.610918

Source: Data processed

Table 3 presents the correlation matrix between the variables. The VIF values indicate no serious multicollinearity, with all values ranging from 1.29 to 1.76, well below the critical threshold of 10. The correlation results show that trade openness (TRD) is positively correlated with FDI (coefficient: 0.5268, $p < 0.01$), inflation (INF) is negatively correlated (coefficient: -0.4363, $p < 0.05$), and telecommunications infrastructure (TIL) is positively correlated (coefficient: 0.5090, $p < 0.01$). These preliminary correlations provide initial support for the research hypotheses.

Table 3. Correlation Matrix and VIF

Variable	FDI	GDP	TRD	INF	TAX	LogTI	VIF
FDI	1,000						
GDP	-0.1223	1,000					1.390
TRD	0.5268***	0.0384	1.0000				1.730
INF	-0.4363**	-0.3179	-0.3033	1.0000			1.290
TAX	-0.2765*	-0.1000	-0.6036	0.1978	1.0000		1.760
LogTI	0.5090***	-0.3007	0.4176	-0.1858	-0.4326	1.0000	1.590
Note: An asterisk (*) indicates the statistical significance level of the correlation with FDI, where * is significant at the 10% level, ** is significant at the 5% level, and *** is significant at the 1% level. All VIF values below 10 indicate that there are no serious multicollinearity issues in the model.							

Source: Data processed

The regression results support H1: trade openness has a statistically significant positive effect on FDI. The coefficient for the TRD variable is 0.0067819, indicating a significant level of 1%. This indicates that a 1% increase in the trade-to-GDP ratio is

associated with a 0.68% increase in FDI. The conclusions mentioned above align with the research by Demirhan & Masca (2016) and Dunning (2009) and are consistent with the theory of locational advantage within the OLI framework. Hypothesis H2, concerning the negative effect of inflation stability on FDI, is also supported. The coefficient for INF is -0.0179 ($p < 0.05$), meaning that higher inflation significantly reduces FDI inflows. The idea reflected in H3, that telecommunications systems are positively associated with Foreign Direct Investment (FDI), is supported by a TIL (or LIT) coefficient of 0.1332132, which indicates statistical significance at the 5% confidence level. This finding aligns with Shah's (2014) study, which highlights the importance of digital infrastructure in the modern era.

However, statistical evidence does not support hypotheses H4 and H5. Although not statistically significant, economic growth (GDP) shows a negative coefficient, while tax policy (TAX) shows a positive coefficient that is also insignificant. A deeper theoretical explanation is warranted for the insignificance of GDP growth and tax policy, as these findings contradict several classical studies. For economic growth (GDP), the non-significant result can be explained through several theoretical lenses. First, from the perspective of location theory, multinational enterprises may prioritise long-term economic stability and institutional quality over short-term growth rates, particularly in developing countries where GDP growth is often volatile and subject to external shocks (Blonigen, 2005; Asiedu, 2006).

The market-seeking motive of FDI, which typically drives investment towards high-growth economies, may be weaker in the context of developing countries that are primarily integrated into global value chains as production bases rather than consumption markets (Helpman et al., 2004). In such cases, efficiency-seeking FDI—which focuses on cost reduction and productivity—may be more sensitive to factors like trade openness, infrastructure quality, and political stability than to GDP growth per se (Jordaan, 2004). Third, the cross-sectional design of this study captures a single-year snapshot (2019), which may mask the longer-term effects of growth on FDI that would be observable in panel data (Blonigen, 2005). Investors may also have already incorporated growth expectations into their decisions through other variables such as infrastructure and institutional quality, rendering the direct effect of GDP growth insignificant in a cross-section.

For tax policy (TAX), the lack of significance can be explained by several theoretical arguments. First, the profit-maximisation assumption underlying the negative tax-FDI relationship may be attenuated by the prevalence of tax avoidance strategies employed by multinational corporations, such as transfer pricing, thin capitalisation, and the use of tax havens, which reduce the effective tax burden below statutory rates (Dharmapala, 2014; Hines Jr & Rice, 1994). Second, the location decisions of multinational firms are increasingly driven by non-tax factors such as market access, infrastructure quality, and labour skills, with tax

considerations playing a secondary role (Mooij & Ederveen, 2008). Third, in developing countries, tax incentives are often rendered ineffective by poor governance, bureaucratic inefficiency, and corruption, which increase the overall cost of doing business and offset any tax advantages (Wei, 2000; Djankov et al., 2010). Fourth, the effect of taxes on FDI may be non-linear: beyond a certain threshold, further tax reductions yield diminishing returns, especially when other investment climate factors are weak (Becker et al., 2012). Finally, the cross-sectional nature of this study captures a specific period (2019) when global tax competition was intense and many developing countries had already reduced their corporate tax rates to competitive levels, thereby limiting the variation needed to identify a significant effect.

These findings are consistent with the broader literature that emphasises the primacy of structural and institutional factors over cyclical or policy variables in attracting FDI to developing countries. The insignificance of GDP growth and tax policy suggests that policymakers should focus on strengthening fundamental determinants—such as trade openness, macroeconomic stability, and digital infrastructure—rather than relying on growth prospects or tax incentives alone to attract foreign investment (Aizenman & Spiegel, 2006; Busse & Hefeker, 2007).

These results are interesting because they contradict several previous studies, but are in line with recent research showing that institutional and infrastructure factors may be more important than economic expansion and tax incentives in some situations (Busse & Hefeker, 2007). The insignificance of economic growth (GDP) and tax policy (TAX) is somewhat surprising, but consistent with some recent studies. For example, research by Blonigen (2005) indicates that tax effects may not be linear and may be mitigated by tax treaties and transfer pricing. For economic growth, investors may be more concerned with long-term stability than short-term growth, especially in developing countries with high volatility.

Table 4. Regression Results

Variable	Coefficient	Std. Error	t-stat	p-value	[95% confidence interval]	
GDP	-0.0329	0.0306	-1.076	0.288	-0.0946326	0.0287408
TRD	0.0068***	0.0025	2.734	0.009	0.0017808	0.0117831
INF	-0.0179**	0.0066	-2.709	0.010	-0.031214	-0.0045818
TAX	0.0132	0.0133	0.994	0.325	-0.0135717	0.0400141
LogTI	0.1332**	0.0598	2.228	0.031	0.012693	0.2573335

CONS	-0.8979	0.5153	-1.742	0.088	-1.936427	0.1407142
R-square	0.4833	Adjusted R-squared		0.4246		
F-statistic	8.230	Probability > F		0.0000		

Note: Asterisks (*) indicate statistical significance, where * means significant at the 10% level, ** means significant at the 5% level, and *** means significant at the 1% level.

Source: Data processed

This research offers considerable value by enhancing understanding of the factors influencing foreign direct investment in developing countries, particularly in light of the current digital economy. Key findings on three critical factors – trade liberalisation, inflation stability, and telecommunications infrastructure standards – highlight the need for a comprehensive approach when designing policies to attract foreign direct investment. First, the theory of global value chain integration is supported by the crucial importance of transparency in cross-border sales and purchasing activities. In today's increasingly interconnected economic landscape, a country's ability to actively engage in global production chains is essential for attracting investment (Baldwin, 2016).

Countries with superior levels of trade transparency generally have better access to international markets, which attracts investors seeking more efficient production and distribution methods. Secondly, maintaining stable inflation is crucial because it supports a calm and predictable economy. High inflation not only indicates unstable monetary policy but also points to serious problems in how a country manages its economy (Darby et al., 2010). Foreign investors typically avoid countries with high inflation because investing there feels too risky and uncertain. Third, the importance of telecommunications infrastructure demonstrates the influence of digital transformation on a country's investment allocation. The ability to utilise the internet and digital technology has become as vital as traditional infrastructure, such as buildings and roads, during the fourth industrial revolution (World Bank, 2019). Countries with highly advanced communication systems are more attractive to investors who utilise digital technology as a core component of their business operations. The findings that sluggish economic growth and tax regulations do not significantly influence investment decisions indicate that foreign investors prioritise long-term structural and institutional factors over temporary economic growth or tax cuts. This aligns with recent studies showing that policy stability and institutional quality may be more important than the level of economic expansion in attracting Foreign Direct Investment (Aizenman & Spiegel, 2006).

V. CONCLUSION AND RECOMMENDATION

This study, based on an evaluation of data from various fields across 50 developing countries in 2019, shows that factors such as open trade policies, controlled inflation, and robust telecommunications infrastructure are important in determining the amount of Foreign Direct Investment (FDI). The study shows that trade liberalisation has a significant positive impact on FDI, with a coefficient value of 0.0068. Inflation, on the other hand, has a significant negative impact on FDI, as indicated by a coefficient of -0.0179 . On the other hand, the availability of telecommunications infrastructure shows a positive correlation with FDI, as indicated by a coefficient of 0.1332, suggesting an increase of around 5%.

Based on these findings, several concrete and feasible recommendations are proposed for practitioners and regulators in developing countries. The Ministry of Trade should accelerate regional trade integration by ratifying trade agreements and establishing one-stop service centres to reduce customs clearance times to less than 48 hours. The Central Bank needs to strengthen its inflation-targeting framework by setting clear annual limits (e.g., 2–4%) and enhancing monetary policy transparency by publishing periodic reports.

The Ministry of Communications should allocate at least 1% of GDP to digital infrastructure development through public-private partnership schemes that offer tax incentives to telecommunications operators. The Investment Promotion Agency needs to shift its promotional focus from general attractions to digital-intensive sectors by providing specific investment prospectuses and dedicated service desks for foreign investors. The Tax Authority should simplify tax administration through an online payment portal and by issuing clear advance tax assessments, rather than lowering tax rates. Finally, the government needs to establish a National Investment Facilitation Task Force that meets quarterly to monitor progress and resolve cross-ministerial obstacles.

This study has the limitation of a cross-sectional design, which restricts dynamic analysis. Future research should use long-term panel data, expand the sample to include low-income countries, update the measurement of telecommunications infrastructure with broadband and 5G indicators, and incorporate variables related to institutional quality and human capital. The use of quantile regression and comparative case studies of high-performing countries is also recommended to enrich our understanding.

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